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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/708,520

03/09/2004

Michael Zinanti

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7590

01/11/2005

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EXAMINER

CAO, HUEDUNG X

ART UNIT

PAPER NUMBER

2821

DATE MAILED: 01/11/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b> 10/708,520	<b>Applicant(s)</b> ZINANTI ET AL.	
	<b>Examiner</b> Huedung X Cao	<b>Art Unit</b> 2821	

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --**

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 11/22/04.
- 2a) ☒ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-32 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-32 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

## DETAILED ACTION

### *Claim Rejections - 35 USC § 102*

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

2. Claims 1-27, and 29-32 rejected under 35 U.S.C. 102(e) as being anticipated by Weinstein (US 2003/0231138 A1).

With respect to claim 1, Weinstein teaches an omni directional antenna, comprising: a substrate (figure 4, substrate 514), the substrate comprising a radiation portion (page 4, column 1, line 13) and a power feed portion (page 4, column 2, line 38), wherein a surface of the substrate defines a plane; a plurality of radiating elements coupled to the radiation portion of the substrate (page 4, column 2, lines 21-32); at least one power dissipation element coupled to the power feed portion of the substrate (page 4, column 1, lines 33-35); a power feed coupled to the plurality of radiating elements (page 4, column 2, line 38); and a ground coupled to the at least one power dissipation element, such that the at least one power dissipation element reduces an impact of the power feed on a radiation pattern of the omni directional (page 6, column 1, line 44-column 2, line 17).

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Claim 2 adds into claim 1, wherein the substrate comprises a printed circuit board (page 3, column 1, lines 13-15).

Claim 3 adds into claim 1, wherein the plurality of radiating elements comprise a corresponding plurality of lengths (page 4, column 1, line 52-column 2, line 4).

Claim 4 adds into claim 3, wherein at least two of the corresponding plurality of lengths are identical (figure 1).

Claim 5 adds into claim 3, wherein at least two of the corresponding plurality of lengths are different (page 4, column 1, line 52-column 2, line 4).

Claim 6 adds into claim 1, wherein the plurality of radiating elements correspond to the number of the at least one power dissipation elements (page 4, column 1, lines 33-35).

Claim 7 adds into claim 1, wherein the power feed comprises a conductor of a coaxial cable and the ground comprises a jacket of the coaxial cable (page 6, column 6, lines 22-26).

Claim 8 adds into claim 7, wherein the jacket of the coaxial cable is coupled to the at least one power dissipation element along a length thereof (page 6, column 1, line 14-62).

Claim 9 adds into claim 1, wherein the plurality of radiating elements comprises two radiating elements (figure 1).

Claim 10 adds into claim 9, wherein the two radiating elements have different lengths (page 4, column 1, line 52-column 2, line 4).

Claims 11-13 add into claim 1, wherein the at least one power dissipation element comprises three power dissipation elements, wherein at least one of the three power dissipation elements has a different length than at least one of the other two power dissipation elements; wherein the at least one power dissipation element comprises three power dissipation elements (page 4, column 1, lines 33-35).

Claim 14 adds into claim 1, wherein the plurality of radiating elements reside in a plane substantially parallel to the plane defined by the substrate (page 4, column 1, line 13).

Claims 15-26 are similar to claims 1-14; therefore, they are rejected for the same reason.

Claims 27, and 29-32 are similar in scope to claims 1-14 except for the steps of, wherein the substrate is formed of a non flexible material, wherein the non flexible material is printed circuit board material, wherein the printed circuit board material is molded using an injection mold (page 4, column 1, line 52-column 2, line 4).

### ***Claim Rejections - 35 USC § 103***

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claim 28 is rejected under 35 U.S.C. 103(a) as being unpatentable over Weinstein (US 2003/0231138 A1) in view of Chung (US 6,421,013 B1).

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with respect to claim 28, wherein the substrate is formed of a flexible material which Weinstein does not explicitly disclose. However, Chung teaches that such substrate that formed by flexible material is widely used in the art (Chung, column 8, lines 12-21). It would have been obvious to one of ordinary skill in the art at the time the invention was made to use a flexible material for the substrate such as adhesive in order to provide additional mechanical strength.

### ***Response to Arguments***

5. Applicant's arguments filed on 11/10/04 have been fully considered but they are not persuasive.

Applicant argues that Weinstein is not an omni directional antenna at both operating frequency. However, in Applicant's claim 1; it only discloses an antenna system radiates in an omni directional pattern, the claim does not disclose an antenna system radiates in an omni directional pattern for all frequency bands. Therefore, the 35 USC 102 rejections to claims 1-27, and 29-32 stands.

Since, the 35 USC 102 rejections to claims 1-27, and 29-32 stands, therefore the 35 USC 103 rejections to claims 28 also stands.

### ***Conclusion***

6. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

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A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

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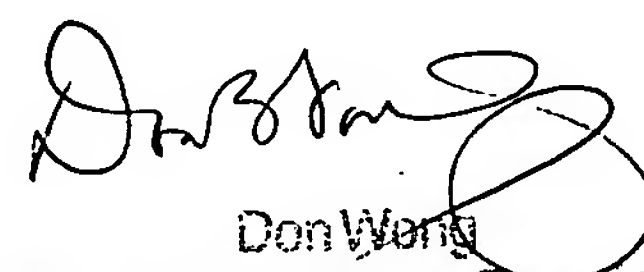
***Inquires***

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Huedung Cao whose telephone number is (571) 272-1939.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Don Wong, can be reached on (571) 272-1834. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

8. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

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Don Wong  
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Technology Center 2800